

ANALYTICAL AND BIBLIOGRAPHICAL NOTICES.

ART. XXII.—*Autumnal Catarrh (Hay Fever)*. With three Maps. By MORRILL WYMAN, M.D., Late Hersey Professor Adjunct of the Theory and Practice of Medicine in Harvard University. 8vo. pp. 173. New York: Hurd & Houghton, 1872.

DR. WYMAN, who has evidently devoted much time to the study of his subject, is convinced that in this country two separate and distinct forms of annually recurring disease are confounded under the name of "hay fever." One of these, known as the "rose cold" or "June cold," generally commences early in the summer and continues until the first week in July. This corresponds, he says, in most of its symptoms and in the time of attack with that popularly known in England as the "hay fever" or "hay asthma"; but that the two diseases are not completely identical, appears from the fact that individuals who have suffered here with "rose cold" have entirely escaped any similar disease during summers which they have spent in England or on the continent.

The other form occurs in autumn, and has received very little attention from medical writers. Although himself a sufferer from it, and therefore interested in looking up the literature of the disease, the author has not been able to meet with a description of it earlier than his own in 1854, when he described it in his course of lectures in the medical school of Harvard University; his knowledge of it having been gained, partly from his experience of it in his own person, and partly from observation of the few cases which had at that time come under his care for treatment. In May, 1866, he embodied the facts then known to him in a paper which he read before the Massachusetts Medical Society at its annual meeting in Boston. Since then he has had more frequent opportunities for examining the subjects of the disease, and has availed himself, whenever this was possible, of the experience of other physicians. To render the histories of the cases, which are appended to the volume, as accurate as possible, they were written and corrected in the presence of the patients; in many instances the words used by them being given, in order to disabuse the reader of the impression that the author has allowed his own views as to the nature and course of the disease to have an undue influence upon him.

Dr. Wyman proposes to give to the disease which he describes the name of autumnal catarrh. This name he prefers to those in general use, because it is in conformity with the nomenclature of Dr. Bostock, who it will be recollected called the "June cold" *Catarrhus Æstivus*,¹ and because it involves no theory as to its cause, of which very little is known. He uses the term catarrh to indicate "a condition of the mucous membrane, accompanied by a flow of a thin secretion, not necessarily implying inflammation," while the word autumnal designates with sufficient distinctness the season of the year at which it takes place. The popular names of "hay fever" and "hay asthma" are inappropriate as indicating the disease under consideration, simply for the reasons that

¹ Medico-Chirurgical Transactions, vol. x. and vol. xiv.

in most of the regions where it occurs, the hay has been cut and gathered in long before its appearance, and that "it is only in exceptional cases that the smell or dust of hay, any more than any other dust, produces uncomfortable sensations in the subjects of this disease." Asthma, although a frequent attendant upon the disease, is not a necessary accompaniment of it, and is rarely so prominent as some of the other symptoms.

We are sorry that want of space will not allow us to reproduce in full the admirable outlines of this disease which Dr. Wyman has traced for us; we shall endeavour however, as briefly as possible, to lay before our readers a sketch of its principal characteristics. In the first place, nothing connected with it is more remarkable than the regularity with which, in the majority of cases, its first symptoms are observed every year about the 20th of August, and even it is said in some instances at the same hour of the day. A slight itching in the palate and in the parts connected with the throat generally first reminds the sufferer that the time for his annual attack has arrived. In a few cases, however, the symptoms are preceded by evidence of constitutional disturbance. In a day or two there is superadded an irritation of the lining membrane of the nostrils, which gives rise to a sense of obstruction, and to attacks of sneezing occurring in paroxysms, and at first only in the morning. These attacks are generally relieved by active exercise, or by whatever else diverts the blood from the head. Later, there is a discharge from the nostrils of a limpid fluid almost free from mucus. It is occasionally so abundant that when the head is inclined forwards it will run out of the "nose like water from a pitcher almost." This is accompanied by watering of the eyes and itching of the eyelids, causing the patient to rub his eyes violently, which gives rise to intense congestion. Subsequently, the eyelids are observed to be swollen and to be the seat of an eruption of pustules or sties, which are most numerous along the line of insertion of the eyelashes. The sense of smell and of taste are much impaired, and in some cases almost abolished; at times there is partial deafness and a sense of obstruction of the internal ear. Deglutition is interfered with, especially when the nostrils are obstructed. The mucous membrane of the mouth, tonsils, and pharynx partakes of the general irritation; the lips are dry, cracked, and swollen. There is frequently to be observed a papular eruption, especially in the scalp, which is attended by more or less itching. Towards the close of the second week irritation of the bronchial mucous membrane is added to the other symptoms, giving rise to a frequent dry cough. After a paroxysm of coughing a small quantity of glairy mucus may be expectorated with slight relief to the disagreeable sensations in the throat. At this stage asthmatic symptoms occasionally appear, these, although sometimes severe, are generally not long continued.

At the end of the third week, the catarrhal symptoms diminish, the tickling of the fauces ceases, the condition of the eyes improves, but the cough is apt to continue longer, while the heart's action will be noticed to be easily accelerated by exercise, and the pulse occasionally to intermit. The symptoms then gradually diminish until the occurrence of the first frost, when they generally abruptly disappear, leaving behind them debility and a more or less altered state of the mucous membrane, from which the patient, if in otherwise good health, soon recovers. Together with these local effects of the disease, there is generally present a profound nervous depression, rendering impossible any kind of mental work, especially in the latter part of the day. This is attended by great nervousness at night, and inability to sleep, which, together with irritability by day, is an annoying feature of the affection. In severe cases there is a daily paroxysm of fever, accompanied by headache, intolerance of light, and by

debility compelling the patient to keep his room and even his bed for several days in succession. The tendency to this annually recurring affection of the mucous membrane is at length to cause chronic bronchitis, which may in the end undermine the patient's strength.

These are symptoms which do not differ, except in the time of their occurrence and in the fact that they are not relieved at the sea-coast, from those which are said by Dr. Watson to attend the rose cold in England. We are therefore inclined to think that Dr. Wyman has not succeeded in establishing autumnal catarrh as a distinct disease, although he has certainly drawn our attention to the fact of the very general existence in this country of a disease similar in nature to the rose cold, although its symptoms are generally more severe; showing the same tendency to occur in families and alike rebellious to medicinal treatment. He has also shown that there is a period of summer, from July 10th to August 20th, when there is no tendency to the occurrence of this form of catarrh.

Dr. Wyman next proceeds to demonstrate that the disease does not occur in Great Britain, France, Switzerland, or Germany, and that there are many parts of the United States which are exempt from it. "As at present informed," he says, "we may assume that it is a disease of temperate climates. It does not extend much beyond the shores of the great lakes, certainly not into the cold regions of Canada. Neither is it found in the Southern States; that is, it is confined between the parallels of 37° and 47° north latitudes. But it does not occupy the whole of this region; it is not found in the extreme east of the continent, nor does it extend to the far west." He states that the southern limit probably extends from St. Louis eastward to the capes of Virginia; the Editor of this Journal, however, informs us of a lady and her niece, residents of Savannah, both of whom have suffered from the disease, the former in April, the latter in August.¹ To the sufferers from this disease it will be a gratifi-

[¹ A very curious circumstance may be mentioned in connection with the former case. When suffering from her annual attack, some years ago, she was invited to visit a friend in New York, but postponed accepting the invitation until her recovery. A few days after her arrival in New York, which was about the 1st of June, the roses there began to bloom, and she had a second attack.

We may further state that two sisters of the second case, married and living in Philadelphia, are sufferers from this affection. The elder has not escaped her August attack for the past thirty-two years, and for the first nine years she was also afflicted with a June attack.

The younger, who suffers from the June affection, has escaped only once in the past twenty years, and on that occasion she was confined to her chamber, and most of the time to her bed, by a violent attack of acute rheumatism. The first time she left her chamber was to obtain some water in an adjoining bath room, when she at once began to sneeze, her eyes to water, and she believed her enemy had seized her. On raising her head she observed on a high window-ledge a number of roses in a tumbler. She at once made a hasty retreat and did not leave her room until July. Whenever this lady smells a rose, watery eyes, sneezing, etc., result; but her sister enjoys much the odour of roses and of new-cut hay, and experiences not the least unpleasant effects therefrom.

From the closest observation of the disease at the two seasons, we have not been able to detect any *essential* difference between them—certainly no greater difference than occurs in the same individual in different attacks, or in different individuals affected at the same season, and we are therefore persuaded that the periodical affections termed rose cold and hay asthma are really identical affections, and that the cause which produces them, whatever it may be, though not precisely the same in every individual, must be of a closely analogous character. EDITOR.]

cation to know that in the region of country exempted from all tendency to this disease are included those parts of the White Mountains in which are situated the Glen, Gorham, Randolph, Jefferson Hill, Whitefield, Bethlehem Village, the Franconia Notch, the White Mountain Notch, and the various mountains within this line. The Catskill Mountains also afford immunity to many, as do also Oakland, in Maryland, and many places of resort in the Green Mountains and in the Adirondacks. All of these places are elevated some hundred feet above the level of the ocean, but mere elevation is not alone sufficient to give protection, as those who have resorted during attacks to the Berkshire Hills of Massachusetts and the elevated plateaus of New York have discovered. This immunity also cannot be explained by the lower temperatures of the places where relief is experienced, for in the case of the White Mountains the temperature is almost identical with that of the homes of some of those who obtain relief there. By residence in this region of immunity, during the time in which autumnal catarrh usually manifests itself, those subject to it escape, and even those fully under the influence of the malady, on arriving, experience sudden and marked relief.

In regard to the causes of autumnal catarrh little appears to be accurately known. From Dr. Wyman's investigations it appears, that, of seventy-nine patients whose histories he was able to collect, fifty-four were men and twenty-five were women; but that this greater liability of the former does not depend simply upon the greater frequency with which they are exposed to the vicissitudes of weather, is shown by the fact that in six cases only out of the fifty-four would the nature of the occupation or profession of the patient justify the opinion that it had had anything to do with predisposing him to the disease. It appears to belong to the early and middle period of life. Thus, of seventy-nine cases in which the age is given, it is said to have begun in fifty-nine before the patient had reached forty years of age, and in only two after he had passed fifty. There is, as has already been intimated, a marked predisposition in certain families to this disease, as the following will show. "Of seventy-seven cases recorded in our table, in fifteen (one-fifth) more than one member of the same family is also affected—a much larger proportion than exists in the community generally." In what this predisposition consists it is at present impossible to say. Those who are susceptible to its causes do not manifest at other seasons of the year a greater liability to ordinary colds than other persons. Indeed, they often boast that their annually recurring catarrh secures them from attacks of other diseases, and it is certain that it does not always prevent them from attaining an advanced age.

In regard to the pathology of the disease, the author says: "The suddenness with which the access commences, the violence and rapidity with which it invades different parts, the redness of the conjunctiva, the injection of its vessels, the profuse lachrymation, the itching, the irritation of the nostrils, copious secretion and sniffing, the irritative spasmodic cough, more like whooping-cough than bronchitis; the sudden spasmodic asthma, the itching of the skin, and the speedy disappearance of all these symptoms, without the usual signs of inflammation, certainly correspond better with what we know of derangements of the nervous system than with those of the mucous membrane, or the organs by which it is invested." He adds in a note that any one acquainted with the investigations of Claude Bernard upon the vaso-motor nerves will readily admit that a parallel might be drawn between the symptoms of autumnal catarrh and the effects of the experiments of this eminent pathologist on the great sympathetic. The view that the disease is essentially

nervous in its origin is, we believe, generally held by pathologists, although "hay asthma" is, for the sake of convenience, almost universally discussed by systematic writers under the head of diseases of the respiratory organs.

The exciting causes of autumnal catarrh are numerous, among them may be mentioned dust and smoke, especially when caused by a railway train, the dust from straw and hay, strong light, as, for example, sunshine falling upon the face, high winds, fruit of various kinds, the stalks and flowers of potatoes, the perfume of flowers, etc. The very general impression that the Roman wormwood is the cause of the whole disease led the author to experiment with it. It flowers in the open air about the middle of August, or a little later, and continues to bloom until late in September; it is covered with a large quantity of a fine pollen, which is constantly shed during the flowering season, and which is capable of exciting a paroxysm in a very large number of persons. The plant also grows luxuriantly in regions where the disease occurs, and only sparingly in mountainous countries.

The experiments of Dr. Wyman show that the Roman wormwood is at least an active exciting cause of autumnal catarrh, and are as follows. Early in September, 1870, he gathered some of the plant in full flower and covered with pollen, and carried it to the White Mountain Glen, where it was kept until September 23d. The parcel was then opened and freely sniffed by himself and son, who, together with his uncle, Professor Jeffries Wyman, has the same predisposition as the author. The characteristic symptoms were produced in each case. The Professor, who, although of the party, did not sniff the plant, escaped entirely. A portion of the same plant was sent to a friend at the Waumbec House, Jefferson Hill, which seems to be a favourite resort of the sufferers from this disease, and the following is the account which he gives of its effects. "Eight persons sniffed the plant. One was seized with asthma and stricture in the chest, and did not entirely recover from the effects until the next day. This person is severely affected with asthma, and particularly sensitive. One was affected with catarrh, as he would have been at the same period at home, and the eyes were irritated for several hours; one had sneezing and coughing for some little time; two had sneezing only. One had sneezing and watering of the eyes; one had only irritation of the eyes for some time; one experienced no effects whatever; eight other persons were in the house at the time who are subjects of the disease, they did not sniff the plant, and were not similarly affected." Other experiments seem to prove that the plant has no special irritating properties, except during the autumn.

It is hardly necessary to discuss the diagnosis of autumnal catarrh. If the attack be fully formed, there is scarcely any danger of mistaking it for any other malady. The author says that the following questions answered affirmatively will usually determine the diagnosis.

1. Has the patient had several similar attacks?
2. Have they occurred annually at the critical period: August 15—September 25?
3. Have they ceased, or been relieved, by change of climate?

The disease is unfortunately very little under the influence of medicines, and a removal of the patient to a non-catarrhal region, which he should not leave until after the occurrence of frost, seems to be the only remedy which is successful at all its stages. Patients who are not able to go so far from home will find the city more comfortable than the country; they should avoid dust and the vicinity of plants known to produce a paroxysm, and sleep in rooms with closed windows so as to prevent currents of air. The application of a solution of quinia to the nostrils has not appeared to the author to be of any service,

but the medicine may be administered with advantage internally in two grain doses twice daily. Arsenic, in the form of Fowler's solution, has also evidence in its favour. During the asthmatic stage, the smoking of stramonium leaves has been most successful, and so has that of the Espic cigarette.¹ The inhalation of sulphuric ether and chloroform give relief to some, but care should be taken not to render the patient insensible. Annoying symptoms may frequently be relieved by palliative measures, such as would naturally suggest themselves to any intelligent physician.

The histories of the cases with which the volume closes add very much to its value. These include descriptions of their own attacks by Daniel Webster and by the Rev. Henry Ward Beecher, both of whom have given very graphic accounts of their sufferings.

The book is an exceedingly valuable monograph, and we hope its appearance may be hailed as an evidence that hereafter American physicians intend to devote themselves more frequently than heretofore to the study and description of diseases which are either peculiar to our own country or are affected by its climate. We are sorry, however, that Dr. Wyman has not taken more pains in the composition; there are evidences of careless writing and proof reading, such as we should not have expected from one of his deservedly high reputation. Our notice is not complete if we do not add that the book contains three maps and a tabular view of eighty-one cases of autumnal catarrh.

J. H. H.

ART. XXIII.—*Thermic Fever or Sunstroke*. By H. C. WOOD, Jr., M.D., Professor of Medical Botany and Clinical Lecturer on Diseases of Nervous System in the University of Pennsylvania; Physician to the Philadelphia Hospital. The Dissertation to which was awarded the Boylston Prize, June 9, 1872. 16mo. pp. 128. Philadelphia: J. B. Lippincott & Co.

In the preface, referring to his earlier published considerations of sunstroke, the author says: "The fact that my observations were rather derided in certain quarters, long since determined me to make at some time an experimental study of the subject. * * * Claiming only that I have endeavoured to find the truth, and asking that my shortcomings may be pardoned, because my work has been honest in its intentions and desires."

The completeness Dr. Wood has given to his task will make his deriders as few and insignificant as his "shortcomings." So they may cease to "molest or make afraid."

The volume before us evidences that the award of the committee was based upon the thorough culture, clinical experience, and careful, laborious research—literary and experimental—which the author has employed in the fulfilment of his work.

The arrangement is into four parts: Part I.—Clinical History; Part II.—Nature; Part III.—Treatment; Part IV.—Sequelæ.

¹ The composition of each cigarette is as follows:—

R. Belladonna leaves		4½ grains.
Hyoscyamus "		2½ "
Stramonium "		2½ "
Phellandrium aquaticum leaves		¾ "
Opium		½ "